

GWYNNS FALLS SEWERSHED STUDY MANHOLE INSPECTION PROTOCOL

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General

1. When arriving at manhole, secure local area. Setup maintenance of traffic controls as needed.
2. Verify that you are at the correct structure. Spend a maximum of five (5) minutes trying to locate a manhole. If a manhole cannot be located, skip inspection and mark a “CNL (Date)” next to the manhole on the plat map.
3. If a manhole is temporarily inaccessible (parked vehicles, vehicular traffic, etc.), skip inspection, mark a “NC” next to the manhole on the plat map and record reason for not completing inspection.
Note: Inspection crews shall attempt to gain access to manholes on two (2) additional occasions before permanently marking the inspection as incomplete.
4. If a new manhole is located, mark the manhole’s general location on the plat map and draw a sketch showing the general location of the manhole in relation to surrounding streets, stream, buildings, etc. Name manhole in accordance with standard manhole naming protocol. On the sketch, record the distance from the center of the manhole cover to the corner of the nearest building and/or street intersection. Record the distance from a minimum of three (3) features. All sketches shall be neatly drawn, include the manhole identification number and show the upstream and downstream manholes (including manhole identification numbers).
5. Remove manhole cover. Make sure cover is in a non-precarious position. Once cover has been removed, no team member will leave the site.
6. Before beginning the manhole inspection, verify:
 - A. Observed flow direction coincides with the direction indicated on the GIS plat map
 - B. Water level is at or below the top of bench
7. After manhole inspection is complete, install manhole cover and make certain that cover is secure.
8. After manhole inspection is complete, mark a “C” next to the manhole on the GIS plat map.
9. If manhole has not been labeled, spray paint manhole number in green as shown on Manhole Labeling Diagram. All manholes will be labeled, regardless of inspection status (i.e. completed, incomplete, could not open, etc.)
10. Spray inspection identification as shown on Manhole Labeling Diagram.
11. For some sewer segments, the GIS maps do not indicate an upstream manhole. If the GIS map indicates that the incoming sewer of the inspected manhole does not have an upstream manhole, the inspection crew will verify if an upstream manhole exists.

MANHOLE INSPECTION PROTOCOL CONT'D

Submittals

1. In general, manhole inspection work is divided between inspection of “model” and “non-model” manholes. Model manholes are defined as manholes with connecting sewers that are 10-inch diameter and larger.
2. Manhole inspection work will be assigned per sewer plat. Inspection crews are responsible for completing inspections for all model or non-model manholes shown on their assigned plat. Sewer plats with no supporting explanation for incomplete inspections will not be accepted.
3. Each GIS plat will have two submittals – one submittal for model manhole inspections and a second submittal for non-model manhole inspections.

Photographs

1. Each manhole inspection shall have the following photos recorded:
 - A. Identification (w/ placard)
 - B. Landscape
2. For pictures of pipe inside manholes, rotate clockwise from the outgoing pipe. The first pipe you encounter is where you begin pictures. The last pipe picture taken is always the outgoing pipe. One picture will be taken of each lateral.
3. Drop-down view of pictures must be oriented so that outgoing pipe is at 12 0'clock.
4. Verify that photo quality is acceptable prior to continuing manhole inspection.
5. At least one photograph will be taken of all defects noted in the manhole inspection.

Manhole Inspection

1. Record down measurements beginning with the first pipe you took pictures of and working clockwise, finishing with the outgoing pipe.
2. If manhole is surcharged, note reason for incomplete inspection in the inspection application and mark an “IC” next to the manhole in the GIS plat map.
3. All manholes on the GIS plat map must be marked (C, IC or CNL) before submitting the plat map to the Field Manager.

Right of Way Manholes

1. The inspection crews will make every effort to access all manholes located in or near a stream and wooded areas.
2. All manholes, regardless of the stack height will be inspected. Inspection crews shall make all efforts to ensure personnel safety.

**MANHOLE INSPECTION
PROTOCOL CONT'D**

3. For manhole stacks greater than five (5) feet in height, the inspection crews will place the manhole label on the upstream side of the stack.